

WHAT IS CLAIMED IS:

1           1.    An arrangement for combining narrowband and  
2    broadband transport mechanisms in a communications network,  
3    comprising:

4                a first node, said first node configured to provide  
5    call control functions and connection control functions; and

6                a second node, said second node connected to said  
7    first node by at least one link, said second node configured  
8    to provide connection control functions, said second node  
9    adapted to rely on said first node for call control  
10   functions.

1           2.    The arrangement according to claim 1, wherein said  
2    first node is directly connected to said second node by the  
3    at least one link.

1           3.    The arrangement according to claim 1, wherein said  
2    second node does not provide call control functions.

1           4.    The arrangement according to claim 1, wherein said  
2   first node includes a synchronous transfer mode (STM) switch,  
3   and said second node include an asynchronous transfer mode  
4   (ATM) switch.

1           5.    The arrangement according to claim 1, wherein said  
2   first node and said second node function together as a single  
3   logical node within the communications network.

1           6.    The arrangement according to claim 5, wherein the  
2   single logical node comprises a hybrid switch.

1           7.    The arrangement according to claim 1, wherein said  
2   first node is further connected to a time division  
3   multiplexed (TDM) network.

1           8.    The arrangement according to claim 1, wherein said  
2   second node is further connected to a time division  
3   multiplexed (TDM) network and an asynchronous transfer mode  
4   (ATM) network.

1           9.    The arrangement according to claim 1, wherein call  
2   control functions comprise switching intelligence of a  
3   telecommunications node, and connection control functions  
4   comprise switching fabric of a telecommunications node.

1           10. An arrangement for combining narrowband and  
2 broadband transport mechanisms in a communications network,  
3 comprising:

4                 a first node, said first node configured to provide  
5 call control functions and connection control functions;

6                 a second node, said second node directly connected  
7 to said first node by at least one link with no intervening  
8 node or nodes, said second node configured to provide  
9 connection control functions; and

10                wherein said second node is not configured to  
11 provide call control functions.

1           11. A dual-node system for combining narrowband and  
2 broadband transport mechanisms in a communications network,  
3 comprising:

4                 a first node, said first node including switching  
5 intelligence and switching fabric;

6                 a second node, said second node connected to said  
7 first node by at least one link, said second node including  
8 switching fabric and adapted to transceive signaling  
9 information over the at least one link; and

10                wherein said first node and said second node  
11 function as a single logical node within the communications  
12 network.

1           12. The dual-node system according to claim 11, wherein  
2 the at least one link comprises a first link and a second  
3 link, each of the first link and the second link operating  
4 in accordance with an ethernet protocol.

1           13. The dual-node system according to claim 11, wherein  
2 the signaling information received from said first node is  
3 utilized by said second node in order to switch an incoming  
4 call using the switching fabric thereof.

1           14. The dual-node system according to claim 11, wherein  
2 said first node comprises a synchronous transfer mode (STM)  
3 switch, and said second node comprises an asynchronous  
4 transfer mode (ATM) switch.

1           15. The dual-node system according to claim 11, wherein  
2 the single logical node comprises a hybrid switch.

1           16. The dual-node system according to claim 11, wherein  
2 said first node is further directly connected to a time  
3 division multiplexed (TDM) network, and said second node is  
4 further connected to the TDM network and an asynchronous  
5 transfer mode (ATM) network.

1           17. The dual-node system according to claim 16, wherein  
2   the TDM network comprises at least one of a public switched  
3   telephone network (PSTN), a public land mobile network  
4   (PLMN), and an integrated services digital network (ISDN).

1           18. A method for combining narrowband and broadband  
2 transport mechanisms in a communications network, comprising  
3 the steps of:

4                 providing a first node having call control  
5 functionality and connection control functionality;

6                 providing a second node having connection control  
7 functionality;

8                 connecting the first node to the second node; and

9                 sharing, by the first node, the call control  
10 functionality with the second node.

1           19. The method according to claim 18, further  
2 comprising the step of:

3                 transmitting, by the second node, incoming  
4 signaling information related to an incoming call to the  
5 first node.



1           20. The method according to claim 19, further  
2 comprising the steps of:

3           receiving, by the first node, the incoming  
4 signaling information related to the incoming call from the  
5 second node;

6           executing, by the first node, call control  
7 functionality with respect to the incoming signaling  
8 information related to the incoming call to produce outgoing  
9 signaling information;

10          sending, by the first node, the outgoing signaling  
11 information to the second node.

1           21. The method according to claim 20, further  
2 comprising the steps of:

3           receiving, by the second node, the outgoing  
4 signaling information from the first node;

5           switching, by the second node, the incoming call  
6 responsive to the outgoing signaling information to thereby  
7 forward an outgoing call from the second node.

1           22. An arrangement for handling calls in a  
2 communications system, comprising:

3           a first node, said first node including call  
4 control logic for performing call control functionality, a  
5 synchronous switch, and first connection control logic for  
6 performing connection control functionality for said first  
7 node; and

8           a second node, said second node connected to said  
9 first node and including an asynchronous switch and second  
10 connection control logic for performing connection control  
11 functionality for said second node, said second node adapted  
12 to receive call control instructions from said first node for  
13 switching communications via the asynchronous switch under  
14 the control of the second connection control logic.

1           23. The arrangement according to claim 22, further  
2 comprising at least one link, said at least one link  
3 connecting said first node and said second node.

1           24. The arrangement according to claim 23, wherein said  
2 second node requests call control instructions from the call  
3 control logic of the first node via said at least one link.

1           25. The arrangement according to claim 23, wherein said  
2 second node forwards received signaling information for an  
3 incoming call to the call control logic of the first node via  
4 said at least one link without re-formatting the received  
5 signaling information.

1           26. A system for combining narrowband applications with  
2 broadband transport, comprising:

3           a first node, said first node including call  
4 control logic for performing call control functionality, a  
5 synchronous transfer mode (STM) switch, and first connection  
6 control logic for performing connection control functionality  
7 for said first node;

8           a second node, said second node connected to said  
9 first node and including an asynchronous transfer mode (ATM)  
10 switch and second connection control logic for performing  
11 connection control functionality for said second node, said  
12 second node adapted to switch communications via the ATM  
13 switch under the control of the second connection control  
14 logic responsive to signaling information received from the  
15 call control logic of said first node;

16           an ATM network, said ATM network directly connected  
17 to said second node for exchanging communications between  
18 said ATM network and said second node; and

19           a time division multiplex (TDM) network, said TDM  
20 network directly connected to said first node for exchanging  
21 communications between said TDM network and said first node.

1           27. The system according to claim 26, wherein said TDM  
2 network is also directly connected to said second node for  
3 exchanging communications between said TDM network and said  
4 second node.

1           28. The system according to claim 26, further  
2 comprising:

3           another TDM network, said another TDM network  
4 directly connected to said second node for exchanging  
5 communications between said another TDM network and said  
6 second node.